REMARKS

The office action of July 11, 2006, has been carefully considered.

It is noted that claims 1-6 are rejected under 35 U.S.C. 112, first paragraph.

Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph.

Claims 1-6 are rejected under 35 U.S.C. 103(a) over the patent to Oxenrider et al. in view of Frey et al.

In view of the Examiner's rejection of the claims, applicant has canceled claim 5 and amended claim 1.

With the amendment to claim 1 it is respectfully submitted that the rejections of claims 1-6 under 35 U.S.C. first and second paragraphs are overcome and should be withdrawn.

It is respectfully submitted that the claims presently on file differ essentially and in an unobvious, highly advantageous

manner from the constructions disclosed in the references.

Turning now to the references, both references have been discussed at length in previously filed amendments and those comments are incorporated herein by reference. The following additional comments are provided.

Applicant will again try to describe for the Examiner the different spinning processes. One process is a melt process as taught by Oxenrider. In this process a polymer or a polymer mixture is melted and the melted mass is presses through a jet, whereby after the jet the spin mass is spun off in a cold air chamber. In this process there is no use of solvents. Thus, a recovery of the solvents is not needed. The melt spinning method is therefore, from the standpoint of technological cost, the most favorable. Solution spinning methods are thus only utilized and their higher cost accepted when the polymer during heating does not have a melting point. In this method the polymer is dissolved in the solvent and this spinning solution is brought to the spinning jet. If a blowing duct is arranged after the jet, i.e. evaporates the highly volatile solvent of the spinning solution by blowing in warm air, a dry spinning process is involved; in contrast, if the spinning solution is passed through a chemical

bath after the jet, i.e. the fibers are spun off in a chemical bath, a wet spinning process is involved. Dry spinning and wet spinning are both solution spinning processes and are much more costly compared to melt spinning because the solvent must be recovered.

Oxenrider et al. disclose synthetic fibers having improved soil and stain repellency. These fibers are produced by a melt spinning process. A disadvantage of a melt extrusion is that the fluorocarbon components, due to their even division in the melt, are also evenly divided or separated across the cross section of the fiber and only the part of the fluorocarbon that is on the surface of the fiber acts as a repellent. This is where the present invention comes in. The exchange of the melt extrusion for obtaining a repellant fiber with another process, namely the more costly solution spinning process for obtaining the repellant fibers is not the only change, in addition, a solution spinning process must be selected which results in a fiber have a high fluorocarbon concentration on the surface of the fiber. The migration of the fluorocarbons on the outer surface of the fiber is possible due to the use of the solvent as a dispersing agent. In this process the fluorocarbon components are also uniformly distributed in the spinning solution. During spinning the

fluorocarbon components can migrate in the direction of the outer surface so that a concentration of these groups on the outer surfaces of the spun fibers is obtained. This migration is supported by the escaping of the solution agent out of the fiber during hardening. In this way a fiber is obtained by solution spinning that has much higher repellency. This was not previously known even though solution spinning methods (Frey et al.) were known since 1957 and fibers with repellency (Oxenrider et al.) were known since 1973.

It is, of course, obvious to exchange one production process with a similar production process. However, one would not replace a technically simple/low cost process with a technically complex/costly process unless there is a specific reason or teaching to do so. The reason for doing so is to obtain increased repellency. However, there is no teaching in either Frey et al. or Oxenrider et al. that making the change would provide any results, let alone improved repellency. This is only taught by the presently claimed invention. Frey et al. teach using polyacrylnitril in a solution spinning process, namely in a dry spinning process. However, since polyacrylnitril, as shown by Oxenrider et al., can also be produced in a melt extrusion, there is no suggestion or motivation for one skilled in the art to

substitute a more complex and costly process. There is no teaching or suggestion by either reference that a fiber could be obtained from the solution spinning process that would have considerably higher repellency than a fiber produced by a melt extrusion process. Only from the present application is there a teaching of using a polymer mix of polyacrylnitril and an ambivalent polymer with fluorocarbon groups and nitril groups in a solution spinning process. There is no suggestion of this in the cited prior art.

Frey et al. do not teach that the added solvent can be used as a carrier material for the ambivalent additive, in particular for the fluoropolymer and by use of the solvent a desired migration of the fluoropolymer out of the fiber onto the surface can follow, as in the present invention. It is further noteworthy that in 1953, the year the Frey et al. patent issued, fluoropolymers were not even known.

Applicant respectfully submits that neither of these references, nor their combination, teach a wet spinning process for the production of a textile fiber with permanent repellent action as recited in the claims presently on file. There is no teaching in either of the references or their combination for replacing a melt (dry) extrusion with a solution (wet) process to

provide fibers with improved repellency, since neither of the references discusses the migration process that takes place within the fiber during production of the fiber. Thus, it is respectfully submitted that the combination of references does not teach or suggest the presently claimed invention.

In view of these considerations it is respectfully submitted that the rejection of claims 1-6 under 35 U.S.C. 103(a) over a combination of the above-discussed references is overcome and should be withdrawn.

Reconsideration and allowance of the present application are respectfully requested.

Any additional fees or charges required at this time in connection with this application may be charged to Patent and Trademark Office Deposit Account No. 11-1835.

Respectfully submitted,

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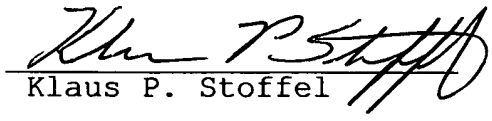
CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, PO Box 1450 Alexandria, VA 22313-1450, on October 11, 2006.

By: 
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